NON-PUBLIC?: N
ACCESSION #: 9001300245
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Fermi 2 PAGE: 1 OF 04

DOCKET NUMBER: 05000341

TITLE: Reactor Scram Due to an Inadvertent Manually Initiated Main Steam Isolation Valve Closure

EVENT DATE: 12/18/89 LER #: 89-036-00 REPORT DATE: 01/17/90

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 20

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Joseph Pendergrast, Licensing Engineer

TELEPHONE: (313) 586-1682

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On December 18, 1989, Instrument & Controls (I&C) personnel signed on surveillance 44.020.151, "NSSSS - Reactor Water Cleanup Differential Flow Functional Test". An I&C technician stationed in the Control Room requested the Control Room Operator to reset Nuclear Steam Supply Shutoff System (NSSSS) Division I and II Main Steam Isolation Valve (MSIV) logic, as directed by the procedure.

At 2230 hours, the Control Room Operator inadvertently depressed the closed push buttons on the A, B and C inboard MSIV's and a reactor scram resulted. The immediate actions of the Reactor Scram Abnormal Operating Procedure (20.000.21) were performed and the plant was in a stable condition at 2240 hours.

The cause of this event was Operator error. Nuclear Training is reviewing resetting the Nuclear Steam Supply System isolation logic with control room personnel. The Operator involved was removed from licensed duties and participated in an accelerated requalification training program. A critique of this event will be issued as required reading.

END OF ABSTRACT

Initial Plant Conditions:

Operational Condition: 1 (Power Operation)
Reactor Power: 20.5 Percent
Reactor Temperature 540 degrees Fahrenheit
Reactor Pressure: 930 Psig

Description of the Event:

On December 18, 1989, Instrument & Controls (I&C) personnel signed on surveillance 44.020.151, "NSSSS - Reactor Water Cleanup Differential Flow Functional Test". An I&C technician stationed In the Control Room requested the Control Room Operator to reset Nuclear Steam Supply Shutoff System (NSSSS) (JE) Division I and II Main Steam Isolation Valve (MSIV) (ASV) logic, as directed by the procedure.

The Control Room Operator thought that the MSIV push buttons needed to be depressed for their current position prior to pushing the MSIV logic reset push buttons. At 2230 hours, the Operator inadvertently depressed the "close" push buttons on the A, B and C inboard KSIV's (all inboard MSIV's indicated open). The Control Room Operator realized his error while depressing the "C" inboard MSIV "close" push button and noticed the "A" inboard MSIV going closed. The Operator immediately depressed the "open" push buttons on the A, B and C inboard MSIV's but a reactor scram had already occurred due to MSIV position (< 92% open). Group Isolation Valves (ISV) for the Residual Heat Removal Shutdown Cooling (BO) and Head Spray (BG), Drywell Sumps (WK), and Traversing In-Core Probe (IG) systems received an isolation Signal as expected when Reactor Vessel level 3 (Low Level) was reached due to level shrink. The valves that were open isolated.

The immediate actions of the Reactor Scram Abnormal Operating Procedure (20.000.21) were performed and the plant was in a normal shutdown condition at 2240 hours.

Cause of the Event:

The cause of this event was Operator (Utility Licensed) error. The Control Room Operator did not use the proper method for resetting the NSSSS isolation logic. In addition, the Operator did not follow Operations Practice Standard 105, "Equipment Operation". This Standard requires that the Operator verify system response after action taken. This was not done and three MSIVs were inadvertently closed.

Analysis of the Event:

The closure of the MSIVs resulted in a reactor scram. During the reactor scram all safety systems functioned as designed. group Isolation Valves for Residual Heat Removal Shutdown Cooling and Head Spray, Drywell Sumps, and Traversing In-Core Probe systems isolated as expected on the Reactor Vessel level 3 isolation signal per design. The immediate actions of the Reactor Scram Abnormal Operating Procedure (20.000.21) were performed and the plant was in a normal shutdown condition at 2240 hours. Therefore, the health and safety of plant personnel and the general public was protected at all times during this event.

In addition, it should be noted that the affected MSIVs reopened before going fully closed in response to the Operator's action of pushing the "open" push button. Operation of the MSIVs in this manner was discussed with the valve vendor, Atwood & Morrill Company. No degradation of the HSIVs should be incurred from this operation.

Corrective Actions:

The Operator involved was removed from licensed duties and participated in an accelerated requalification training program. A critique of this event will be issued as required reading. This required reading will be issued by January 31, 1990. Nuclear Training is reviewing resetting the Nuclear Steam Supply System isolation logic with control room personnel. This will be completed by January 31, 1990. The surveillance procedure 44.020.151 will be revised to identify the method for resetting the NSSSS Division I and II MSIV logic. This will be completed by January 31, 1990.

Detroit Edison has developed an action plan which was described in Detroit Edison letter NRC-89-0300, dated December 26, 1989. This plan will address personnel performance weaknesses identified during the first refueling outage and during the return to power operation.

Previous Similar Events:

This is the first reportable occurrence related to the inadvertent closure of the MSIVs due to personnel error. There were two reportable events where the MSIVs were inadvertently closed due to inadequate procedures. These events were reported in Licensee Event Reports 88-002, "Main Steam Line Radiation monitor Surveillance Procedure Inadequacy Causes Main Steam Isolation Valve Closure", and 87-037, "Inadvertent Actuation of the Inboard Main Steam Isolation Valves Due to Procedural Inadequacy".

William S. Orser
Vice President
Nuclear Operations

Detroit Fermi 2
6400 North Dixie Highway
Newport, Michigan 48166
Edison (313) 586-5201

10CFR50.73 Nuclear
Generation

January 17, 1990
NRC-90-0007

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Reference: Fermi 2
NRC Docket No. 50-341
Facility Operating License No. NPF-43

Subject: Licensee Event Report (LER) No. 89-036

Please find enclosed LER No. 89-036, dated January 17, 1990, for a reportable event that occurred on December 18, 1989. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Joseph Pendergast at (313) 586-1682.

Sincerely,

Enclosure: NRC Forms 366, 366A

cc: A. B. Davis
J. R. Eckert
R. W. Defayette/W. L. Axelson
W. G. Rogers
J. F. Stang

Wayne County Emergency
Management Division

*** END OF DOCUMENT ***